



DynCorp of Colorado, Inc.

Medical Surveillance

MEDICAL SURVEILLANCE

Rocky Flats
Environmental Technology Site

Joseph Furman, M.D., Sc.D.
Phone: (303) 966-2895



DynCorp of Colorado, Inc.

Medical Surveillance

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

History of beryllium sensitization and disease
1984 - present

Workers contacted	- 18,841
Tested	- 6,614
Chronic Beryllium Disease	- 81
Sensitized - no disease	- 163



DynCorp of Colorado, Inc.

Medical Surveillance

EXPOSURE DETERMINES MEDICAL MONITORING NEEDS

- High level
- Low level
- No exposure



DynCorp of Colorado, Inc.

Medical Surveillance

WHAT IS HIGH LEVEL?

- 2.0 ug/m³ - Standard
- 0.5 ug/m³ - Rocky Flats
- 0.2 ug/m³ - EPA LOAEL (HEC) *

* Lowest Observable Adverse Effect Level
(Human Equivalent Concentration)



DynCorp of Colorado, Inc.

Medical Surveillance

WHAT MAY INFLUENCE?

- Air Monitoring
- Personal Protective Equipment
- Industrial Hygiene Oversight
- Prevalence of Sensitivity & Disease



DynCorp of Colorado, Inc.

Medical Surveillance

WHAT IS LOW LEVEL?

- 0.01 ug/m³ General Public
- 0.02 ug/m³ EPA RfC *

* Inhalation Reference Concentration



DynCorp of Colorado, Inc.

Medical Surveillance

MEDICAL EXAM FOR BERYLLIUM WORKER (HIGH LEVEL POTENTIAL)

- History - Respiratory Emphasis
- Examination - Respiratory & Skin Emphasis
- Pulmonary Functions
- Chest X-ray
- Lymphocyte Proliferation Test
- Cautions



DynCorp of Colorado, Inc.

Medical Surveillance

MEDICAL EXAM FOR BERYLLIUM WORKER (HIGH LEVEL POTENTIAL)

- History - Respiratory Emphasis
- Examination - Respiratory & Skin Emphasis
- Pulmonary Functions
- Chest X-ray
- Lymphocyte Proliferation Test
- Cautions



DynCorp of Colorado, Inc.

Medical Surveillance

CHEST X-RAY

- Frequency - Annual vs. Other
- ILO “B” Reader
- Quality



DynCorp of Colorado, Inc.

Medical Surveillance



DynCorp of Colorado, Inc.

Medical Surveillance

LYMPHOCYTE PROLIFERATION TEST

- Double Positive
- Quality
- Frequency



DynCorp of Colorado, Inc.

Medical Surveillance

DISQUALIFICATION

- Lung Conditions
- Cardiovascular Conditions
- Skin Conditions
- Conditions that make Diagnosis of CBD Difficult



DynCorp of Colorado, Inc.

Medical Surveillance

DISQUALIFICATION

- “any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to ---”



DynCorp of Colorado, Inc.

Medical Surveillance

FOR LOW LEVEL EXPOSURE MEDICAL EXAM

- With or without symptoms?
- History
- Chest X-ray
- Lymphocyte Proliferation Test
- Frequency



DynCorp of Colorado, Inc.

Medical Surveillance

WHAT IS NEXT FOR PATIENTS WITH POSITIVE RESULTS?

- Clinical Work-up
- Pulmonologist with Knowledge of Beryllium Disease
- Lung Lymphocyte Test
- Lung Biopsy



DynCorp of Colorado, Inc.

Medical Surveillance

WHAT ABOUT EQUIVOCAL RESULTS?

- Non-symptomatic - retest in one year
- Symptomatic - clinical workup for highly exposed